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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,137	08/28/2000	Katsumi Hirai	04329 2365	8118

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1300 I Street N W
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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 03/10/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/623,137

Applicant(s)

HIRAI ET AL.

Examiner

Derrick W. Ferris

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4,6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1-3** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It may not be clear from claim 1, line 14 and claim 2, line 14 what applicant means by “the original antenna” since the element lacks antecedent basis. For the purpose of making the rejection, examiner assumes a reasonable but broad interpretation of “original antenna”. Claim 3 is rejected for depending on a rejected parent claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 4-6** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,940,452 A to *Rich et al.* (“*Rich*”).

As to **claim 4**, see figure 1 of *Rich*. With respect to rake reception also see column 8, lines 55-67.

As to **claim 5 and 6**, see figure 6 of *Rich*.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,940,452 A to *Rich et al.* ("*Rich*") in view of "Pilot Power Control and Service Coverage Support in CDMA Mobile Systems" to *Kim et al.* ("*Kim*").

As to **claim 1**, *Rich* discloses a receiver having a dual mode. In particular, in reference to applicant's figure 2, see figure 1 of *Rich*. In particular, note two antennas (114, 116) and an antenna selection means, see e.g., controller 108 in figure 1 of *Rich*.

Rich may be silent or deficient to the further limitation of a handoff control means. In particular, *Rich* discloses in figure 2 a determination process for selecting one or both of the antennas, see e.g., step 204 with respect to step 205 in reference to column 14, lines 6-21. Specifically, *Rich* teaches that if the desired RF signal does not dominate the composite signal (see step 204) than either multipath fading or a soft handoff would occur. The key to the rejection is whether one skilled in the art could determine the difference between multipath fading and a soft handoff. *Rich* discloses that in fact one skilled in the art does know the difference, e.g., see column 14, lines 16-18. Thus *Rich* discloses a further process in figure 6. The examiner has concluded from figure 6 that the differences between multipath and handoff are apparent. Should the differences not be

clear then the examiner has also supplied the obviousness rejection below to further illustrate the examiner's point.

Kim teaches the further recited limitation above at e.g., at page 1465.

Examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include a handoff means for switching an antenna currently selected by the antenna selection means to a remaining antenna to receive a signal when a handoff condition is met in an incoming-call standby mode and then switching the remaining antenna to the "original" antenna to perform handoff processing again when a further handoff condition is met. In particular, the *Kim* reference by itself discloses picking/selecting the pilot signal with greatest power once the current pilot signal drops below a certain threshold, e.g., -14 db. Thus *Kim* teaches a handoff selection. The *Rich* reference by itself discloses performing at block 204 of figure 2 a test of whether a mobile is in a multi-path fading or a soft handoff condition or whether a mobile is in a flat fading condition (e.g., see column 14, lines 12-14). If a mobile is in a first condition of either multi-path fading or a soft handoff then a step 205 is performed. A step 205 as further illustrated in detail in figure 6 is directed only towards multi-path fading since the power ratio is tested for each antenna. One skilled in the art would note from the references taught in combination that if all the conditions in figure 6 fail (i.e., for each antenna a test for handoff condition is met) then one should perform a soft handoff. One skilled in the art would be motivated to perform a soft handoff in order to continue an active call (i.e., so an active call is not dropped). As further pointed out by *Kim*, if during an active call the mobile cannot find an alternative pilot then the call is dropped. Thus

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Kim provides a motivation to find a pilot signal that exceeds a threshold in order to not drop a call. Thus after performing a step 205 if all the tests in figure 6 fail (i.e., a handoff condition is met for each antenna) one skilled in the art would have been motivated to perform a handoff since multi-path fading is not the condition and all the conditions for handoff are met. For the sake of argument, one skilled in the art would not be motivated to perform a handoff before step 205 since if a handoff were performed then a test for multi-path fading for a previous pilot signal would not be preformed. Furthermore, it would also be unclear as to why someone skilled in the art would perform a step 205 after performing a handoff since a new pilot signal has been selected and step 202 has not yet been fully tested departs from the spirit and scope of the invention. Finally, with respect to applicant's figure 2, if there is no handoff performed then a second antenna may be selected if there is multi-path fading according to figure 6 and if a handoff is preformed then an original or first antenna is selected since figure 6 reverts back to the original state after a test for multi-path fading (see step 622).

As to **claim 2**, see the rejection for claim 1.

As to **claim 3**, see figure 1 of *Rich*.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US006212368B1 see figure 7 teaches MAHO with selection diversity in a mobile receiver.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225.


The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


DWF


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 3/5/09